Solitary Schwannoma of Sciatic Nerve. Diagnosis by CT

AUTHOR(S):

SATO, MANABU; HANDA, JYOJI; KOYAMA, TSUNEMARO

CITATION:

SATO, MANABU ...[et al]. Solitary Schwannoma of Sciatic Nerve. Diagnosis by CT. 日本外科宝函 1982, 51(3): 534-536

ISSUE DATE:

1982-05-01

URL:

http://hdl.handle.net/2433/208940

Arch Jpn Chir 51(3), 534～536, Mai, 1982

Solitary Schwannoma of Sciatic Nerve. Diagnosis by CT

MANABU SATO.* JYOJI HANDA,* and TSUNEMARO KOYAMA**

From the Department of Neurosurgery, Shiga University of Medical Science,*
and Ohtsu Municipal Hospital.** Ohtsu
Received for Publication, Jan. 30, 1981.

A solitary schwannoma of the peripheral nerve may arise sporadically in patients who have no evidence of a genetic predetermination of von Recklinghausen's disease. In the leg, schwannomas usually appear on the flexor aspect, especially near the elbow, wrist and knee, and the feet are usually spared. A solitary schwannoma of the sciatic nerve is very rare as a cause of a sciatic pain, and the computed tomographic (CT) diagnosis of such a lesion has not been previously reported.

Case Report

A 48-year-old man presented in June 1981 with a history of recurrent low back and sciatic pain for a duration of 9 years. The pain centered at the right hip and radiated down along the postero-lateral aspect of his right leg. Nine years, 5 years, and again 2 years previously, he had been admitted to another hospitals where a lumbar disk herniation was suspected, but no definitive radiologic investigation was performed. There was neither family history nor physical stigmata of von Recklinghausen's neurofibromatosis.

On neurological examination, there was no pelvic tilt, and no paravertebral muscle spasm was elicited in the lumbar region. The motor function of the leg was normal, except for his right great toe which was useless due to the old untreated fracture. Sensory examination was normal, and the straight leg raising sign was negative. There was no abnormal deep tendon reflexes. Palpating the course of the sciatic nerve, we could locate a small round swelling deep in his right hip. It was extremely tender on gentle palpation and percussion; the pain radiating down along the postero-lateral aspect of his right leg toward the fourth and fifth toes.

Results of routine laboratory examinations were within normal limits. The plain x-ray examination of the lumbar spine and metrizamide lumbar myelography were negative. CT scan at the level of the tender swelling demonstrated a small round mass at the site corresponding to the right sciatic nerve. The mass measured ca 2 cm in diameter. It was less dense than the surrounding muscles, and enhanced homogeneously after an intravenous administration of iodinated contrast medium. On the left side, the sciatic nerve looked normal in appearance (Figure 1).

Key words: CT, peripheral nerve tumor, schwannoma, sciatic nerve.
索引語：CT，末梢神経腫瘍，神経鞘腫，坐骨神経．
Present address: Jyoji Handa, M.D., Department of Neurosurgery, Shiga University of Medical Science, Seta, Ohtsu, Shiga-ken 520-21, Japan.

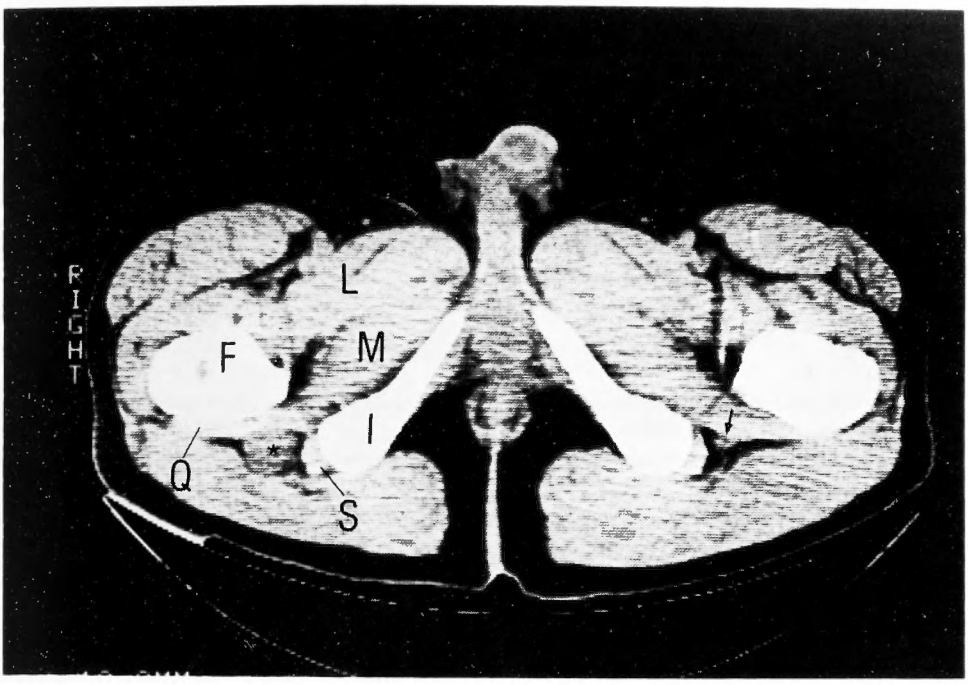

Fig. 1. Noncontrast axial CT at the level of tumor (asterisk).
F: femur, I: ischium, Q: quadratus femoris muscle, S: semimembranaceus and semitendineus muscles, L: adductor longus muscle, M: adductor magnus muscle.
Arrow indicates normal sciatic nerve on the left side.

The patient was subsequently operated on, and a spherical tumor originating from the sciatic nerve was removed. The histopathological diagnosis was a schwannoma. The patient has been asymptomatic up to the time of this writing 7 months after operation, except for a patchy loss of cutaneous sensation in the lateral aspect of his right leg.

Discussion

The recent improvement in resolution of computed tomography has revolutionized the radiological workup in patients complaining of lumbar and leg pain. In such patients, high resolution CT often permits the accurate diagnosis of causative lesions such as lumbar disk herniations without resorting to more invasive tests (1, 2). Recently, YANG et al. reported a patient in whom a neurolemmoma in L_2-L_3 intervertebral foramen was diagnosed only by high resolution CT. The other conventional x-ray studies including myelography failed to demonstrate the lesion at all (3).

Also outside the spinal column, high resolution CT seems to be of diagnostic significance in the selected patients with pain problems. The primary tumors involving the sciatic nerve are infrequent, but they may be quite painful. Such a tumor is often difficult to diagnose particularly when it is lying deep in the buttock and hidden by massive gluteal muscles. With high resolution CT, however, normal soft tissue structures such as muscles, nerve trunks, and large

vessels are clearly visualized, and the neoplastic or inflammatory lesion in or near those soft tissue structures can be easily detected.

In the present case, the deeply situated, small lesion was clearly delineated with high resolution CT. Furthermore, its close relationship with the sciatic nerve was evident when compared with the normal nerve trunk on the contralateral side. Thus, a diagnosis of sciatic nerve tumor was readily made preoperatively, and it was confirmed by operation. Certainly an increase in our clinical experience will further enhance the diagnoctic value of soft tissue CT in radiological workup of patients with pain problems.

References

1) Haughton VM, Syversten A, Williams AL: Soft tissue anatomy within the spinal canal as seen on computed tomography. Radiology **134**: 649–655, 1980.
2) Williams AL, Haughton VM, Syversten A: Computed tomography in the diagnosis of herniated nucleus pulposus. Radiology **135**: 95–99, 1980.
3) Yang WC, Zappulla R, Malis L. Neurolemmoma in lumbar intervertebral foramen. J Computer Assist Tomogr **5**: 904–906, 1981.

和文抄録

単発性坐骨神経鞘腫——CTによる断診

*滋賀医科大学脳神経外科，**大津市民病院脳神経外科
佐藤　学*，半田　譲二*，小山　素麿**

長時間にわたり臀部から下腿に放散するつよい神経痛様疼痛を訴えた例で，他覚的に運動，知覚障害をみとめず，腰椎単純X線，脊髄造影でも異常をみとめなかったが，臀部の有痛性硬結のレベルでのCTで坐骨神経に一致して小腫瘤が発見された．手術により坐骨神経鞘腫を剔出し，疼痛は完全に消失した．

腰痛，下肢痛の原因としての，原発性，単発性の坐骨神経鞘腫はまれであるが，とくに本例の様に臀部においては厚い筋層にかくれ，その診断は困難とされる．この様な軟部組織深部の小病変の診断に際しても，近年の高分解能CTはきわめて有用である．